

WHAT IS CLAIMED IS:

1. A color laser printer comprising:
 - a detachable transfer belt unit having a data storage unit that stores color correction data and position correction data;
 - 5 a detecting unit that detects whether the transfer belt unit is detached and reattached or replaced with another transfer belt unit with the same configuration; and
 - a correcting unit that performs corrections for color difference and position difference based on the color correction data and the position correction data stored in the data storage unit when the
10 detecting unit detects that the transfer belt unit is detached and reattached or replaced with another transfer belt unit with the same configuration.

- 15 2. The color laser printer according to claim 1, wherein the transfer belt unit further includes a transfer belt with a plurality of reference marks, a drive mechanism for the transfer belt, and the color laser printer further comprises
 - a mark detector that detects the reference mark on the transfer
20 belt, and outputs a mark detection signal upon detection of the reference mark;
 - a plurality of photosensitive drums provided in contact with the transfer belt;
 - a plurality of toner tanks each of which supplies toner to a
25 corresponding photosensitive drum; and

a plurality of laser optical systems each of which forms an image on a corresponding photosensitive drum upon output of the mark detection signal.

- 5 3. The color laser printer according to claim 2, wherein the transfer belt is an endless track forming a loop and the transfer belt unit further comprises

a driving roller that is provided at one end and inside of the loop of the transfer belt and drives the transfer belt, and a following roller
10 that is provided at other end and inside of the loop of the transfer belt and follows the driving roller; and

a plurality of primary transfer rollers provided inside of the loop of the transfer belt, each of which presses the transfer belt towards a corresponding photosensitive drum.

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4. The color laser printer according to claim 1, wherein the color correction data and the position correction data are data taking a speed of the transfer belt as a parameter.

- 20 5. The color laser printer according to claim 1, further comprising a printing control system having a memory, wherein the data storage unit transfers the color correction data and the position correction data to the memory.

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6. The color laser printer according to claim 5, wherein the printing control system controls the driving roller to adjust a speed of the transfer belt based on the color correction data and the position correction data transferred.

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7. The color laser printer according to claim 1, wherein the data storage unit is an electrically erasable programmable read-only memory.

10 8. A color laser printer comprising:

a detachable transferring means having a storage means that stores color correction data and position correction data;

a detecting means that detects whether the transferring means is detached and reattached or replaced with another transferring means with the same configuration; and

15 a correcting means that performs corrections for color difference and position difference based on the color correction data and the position correction data stored in the storage means when the detecting means detects that the transferring means is detached and reattached or replaced with another transferring means with the same configuration.

9. The color laser printer according to claim 8, wherein the transferring means further includes a transfer belt with a plurality of reference marks, a drive mechanism for the transfer belt, and the color

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laser printer further comprises

a mark detecting means that detects the reference mark on the transferring means, and outputs a mark detection signal upon detection of the reference mark;

5 a plurality of photosensitive means provided in contact with the transfer belt;

a plurality of toner supplying means each of which supplies toner to a corresponding photosensitive means; and

10 a plurality of image forming means each of which forms an image on a corresponding photosensitive means upon output of the mark detection signal.

10. The color laser printer according to claim 9, wherein the transfer belt is an endless track forming a loop and the transferring means
15 further comprises

a first rolling means that is provided at one end and inside of the loop of the transfer belt and drives the transfer belt, and a second rolling means that is provided at other end and inside of the loop of the transfer belt and follows the first rolling means; and

20 a plurality of primary transfer rolling means provided inside of the loop of the transfer belt, each of which presses the transfer belt towards a corresponding photosensitive means.

11. The color laser printer according to claim 8, wherein the color
25 correction data and the position correction data are data taking a speed

of the transfer belt as a parameter.

12. The color laser printer according to claim 8, further comprising a printing control means having a memory, wherein the storage means
5 transfers the color correction data and the position correction data to the memory.

13. The color laser printer according to claim 12, wherein the printing control means controls the first rolling means to adjust a speed
10 of the transfer belt based on the color correction data and the position correction data.

14. The color laser printer according to claim 8, wherein the storage means is an electrically erasable programmable read-only memory.

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15. A method of correcting color and position difference for a color laser printer, the color laser printer having a detachable transfer belt unit with a data storage unit that stores color correction data and position correction data, wherein when the transfer belt unit is detached
20 and reattached or replaced with another transfer belt unit with the same configuration, the method comprising correcting color difference and position difference based on the color correction data and the position correction data.